

Application No. 10/049,732  
Amendment dated March 5, 2004  
Reply to Office Action of November 7, 2003

AMENDMENT TO THE SPECIFICATION

Page 9, replace the paragraphs starting at lines 1-36 and page 2, lines 1-2 as follows:

drive comprises a drive shaft 10 with bearing seat 14 for a swash plate 16, which Bearing 14 is connected to drive shaft 10 so that its axis is set at a first tilt angle 22 (Fig. 2) relative with respect to the longitudinal direction 20. When positioned on the bearing 14 within a crank chamber 24, the swash plate 16 is seated in a bore of bearing 30 that has a through hole for mounting he bearing on bearing 14 and is tilted at a second angle 28 with respect to a perpendicular line 26 of the swash plate 16. With respect to its driving action, by By way of hemispherical hinge yoke 78, 80, 82, 84, 86, 88, 90, 92 the swash plate 16 is connected to and interacts with four pistons 44, 46, 48, 50 guided contained within cylinders 36, 38, 40, 42 (Figs. 3 and 4). To absorb tractive and pressure loads, each piston 44, 46, 48, 50 is connected to the swash plate 16 by two of the hinge yoke 78, 80, 82, 84, 86, 88, 90, 92, in such a way that one of the hinge yoke 78, 80, 82, 84, 86, 88, 90, 92 contacts the bearing surface 96 of the swash plate 16, faces facing towards the piston 44, 46, 48, 50, whereas the other hinge yoke contacts the bearing surface 94 of the swash plate 16, which faces away from the piston. The hinge yoke 78, 80, 82, 84, 86, 88, 90, 92 run, by way of their flat surfaces, along the bearing surfaces 94, 96 of the swash plate 16 with full circumferential velocity with superimposed radial movement, as a result of which an elliptical track is produced. The rounded surfaces of the hinge yoke 78, 80, 82, 84, 86, 88, 90, 92 are seated in sphere shaped formed bearings 98, 100, 102, 104, 106, 108, 110, 12 of the pistons 44, 46, 48, 50, within which there is comparatively little relative movement during operation.

So that the piston stroke and hence the output output of the axial piston drive can be continuously adjusted, the swash plate 16 is connected to the bearing such that an axis of the bearing through hole is at a second tilt angle (28) relative to an axis (26) perpendicular

Application No. 10/049,732  
Amendment dated March 5, 2004  
Reply to Office Action of November 7, 2003

to a surface of the swash plate made so that it can be rotated on the bearing seat 14 within a certain range of angles by means of a controller 32. When the bearing seat 14 and the bore of bearing 30 are tilted in the same direction, the tilt angles 22, 28 add up to a maximal resulting tilt angle 52 (Fig. 2); if the bearing seat 14 and the bore of bearing 30 are tilted in opposite directions, the tilt angles 22, 28 are subtracted, resulting in a minimal tilt angle 54 (Fig. 4). The minimal resulting tilt angle 54 amounts to ca. 2°, so as to ensure that pressure will be built up when the axial piston drive is started.

Bearing 30 is rotatable on the bearing shaft from a first position in which the first and second tilt axes are added and the swash plate is at a maximum tilt angle to a second position in which the first and second tilt axes are subtracted from each other and the swash plate is at a minimum tilt angle.

A portion of bearing 30 interacts with threaded portion 58 of the bearing shaft such that as bearing 30 is rotated on the bearing shaft, from the maximum tilt angle to the minimum tilt angle, a central point of the swash plate is moved axially toward the cylinder. The central point of the swash plate can thus be defined in a number of ways including a point of intersection between the axis of the through hole and a plane containing the surface of the swash plate.